


Chamaecyparis nootkatensis Alaska Yellow-Cedar

Alaska yellow-cedar (*Chamaecyparis nootkatensis*) occurs in Washington along the west slopes of the Cascade Range at elevations that range from 2000 to 7500 feet, on the ridges of the Olympic Mountains, and in the lowlands of river mouths on the Pacific side of the Olympics (Fowells 1965). Common associates are Pacific silver fir, which has nearly the same range as Alaska yellow-cedar, and mountain hemlock (Franklin and Dyrness 1973). Generally, Alaska yellow-cedar does not form pure stands, but occurs as scattered individuals in this cool moist area where the January mean temperature is 28° F, the July mean is 55° F, and there are 100 inches of annual precipitation. The species range is not continuous along the Cascades, but is separated where the Columbia River cleaves the Cascades.

A nursery test of several coastal British Columbia yellow-cedar provenances detected differences among seed sources for shoot dry weight, shoot-to-root dry weight ratio, and frost hardiness. There were differences among families in height and root collar diameter, but no differences were detected among seed sources for these traits (Cherry and Lester, 1992). Elevation was correlated with provenance shoot-to-root dry weight ratio. Longitude was correlated with shoot dry weight at the provenance level. These preliminary results indicate a need for some seed zone division for Alaska yellow-cedar. Based on preliminary results from field tests on Victoria Island, John Russell (personal communication, March 19, 1999) recommends that there should be more than one geographic zone for Alaska yellow-cedar in Washington, but within the zones only a single elevation band.

Alaska yellow-cedar zones in subarctic British Columbia span two degrees of latitude and 300 meters (1000 feet) of elevation. Along the coast they span four degrees of latitude and 400 meters (1300 feet) in elevation (British Columbia Ministry of Forests, 1995). In Oregon there are two seed zones along the Cascades, a northern one and a southern one, which are separated at the McKenzie River.

New recommendations for seed transfer zone boundaries

ELWHA (Zone 1): The natural range of Alaska yellow-cedar on the Olympic Peninsula.

SKAGIT (Zone 2): The natural range of Alaska yellow-cedar in the northern Washington Cascades (north of Interstate 90).

COWLITZ (Zone 3): The natural range of Alaska yellow-cedar in the southern Washington Cascades (south of Interstate 90) and southward to the southern limit of the species range in Washington near the center of Skamania County.

Elevation bands within geographic seed transfer zones

Since provenance tests of Alaska yellow-cedar are young enough to be somewhat unreliable at this time, our recommendation is more cautious than the data suggest. Elevation bands within each zone are: less than 4000 feet, 4000 - 6000 feet, and above 6000 feet.